



10º Encontro Nacional de Cromatografia

Bragança 2017 – 4 a 6 de dezembro

Abstracts book / Livro de resumos



SOCIEDADE PORTUGUESA DE QUÍMICA



INSTITUTO POLITÉCNICO DE BRAGANÇA Centro de Investigação de Montanha

COM O ALTO PATROCÍNIO DE SUA EXCELÊNCIA



O Presidente da República

Title

10th Chromatography Meeting

Título

10º Encontro de Cromatografia

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Edition / Edição

Instituto Politécnico de Bragança · 2017

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Tel. (+351) 273 303 200 · Fax (+351) 273 325 405

<http://www.ipb.pt>

Imaging services / Serviços de imagem

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URL

<http://hdl.handle.net/10198/8896>

ISBN

978-972-745-234-7



PC-97

HPLC/DAD fingerprint of standardize extracts from *Ligustrum lucidum* Aiton berries, for bioactive activity screening

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Ligustrum lucidum Aiton is a China-native tree, whose fruits provide a reddish black dye that, according to some authors, was used in the past to intensify wine's color. These fruits were also applied in traditional Chinese medicine with the aim of curing fatigue, hemoptysis and dropsy [1]. Studies developed on the last two decades provided scientific evidence regarding its biological activities [2,3], as well as, the presence of several biologically active compounds among which dammarane triterpenes and the flavonoids quercetine, apigenin and luteoline glycosides [1].

This work aims to provide the fingerprint of selected extracts by HPLC-DAD of Portuguese *L. lucidum* berries from two regions and to characterize its bioactive potential.

Profiles were established with three different extraction methods: 1- boiled water; 2- ethanol (100%); 3- ethanol/water (1:1) (v/v) 15 hours of stirring at room temperature at 120 rpm [3]. Phenolic acids and flavone/flavonols structures were determined by UV absorption spectroscopy according to Campos and Markham [4].

Results revealed that fingerprint of the extracts were very similar, however, both regions showed some differences on the concentration of the compounds. Boiling water extract was the more concentrated. Even so, the flavonoids found in all extracts as presented the same structure and the derivatives of caffeic acid, apigenine and luteoline were confirmed as minor constituents. Further studies may be carried out in order to explore the bioactive potential of *L. lucidum* berries.

Acknowledgements:

Centro de Estudos Florestais that is a research unit funded by FCT (UID/AGR/UI0239/2013). Strategic Project RG-Centre-177-3717 from FCT", UID/QUI/00313/2013 and POCI-01-0145-FEDER-007630 (Portugal). Strategic programmer UID/BIA/04050/2013(POCI-01-0145-FEDER-007569) funded by national funds through the FCT, Portugal and by the European Regional Development Fund (ERDF) through the COMPETE2020-Programa Operacional Competitividade e Internacionalização (POCI).

References:

- [1] C. Wiert, *Medicinal Plants of China, Korea, and Japan: Bioresources for Tomorrow's Drugs and Cosmetics*. CRC Press, 2012, pp. 336-337.
- [2] R.S. Lanigan, T.A. Yamarik. *International Journal of Toxicology*. 2002, 21, 19–94.
- [3] T. Delgado, M.G. Campos, N. Farinha, M.L. Estevinho, O. Anjos. *Abs. Book of 65th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA)*. Basel. 2017.
- [4] M.G. Campos, K.R. Markham. *Flavonols and Phenolic Acids*. Ed. Coimbra: Imprensa da Universidade de Coimbra, 2007, pp. 1–118.